June 11, 1963 W. J. BRANDLE 3,093,291

SELF-LOCKING TELESCOPING CONTAINER

Filed May 8, 1961 5 Sheets-Sheet 1

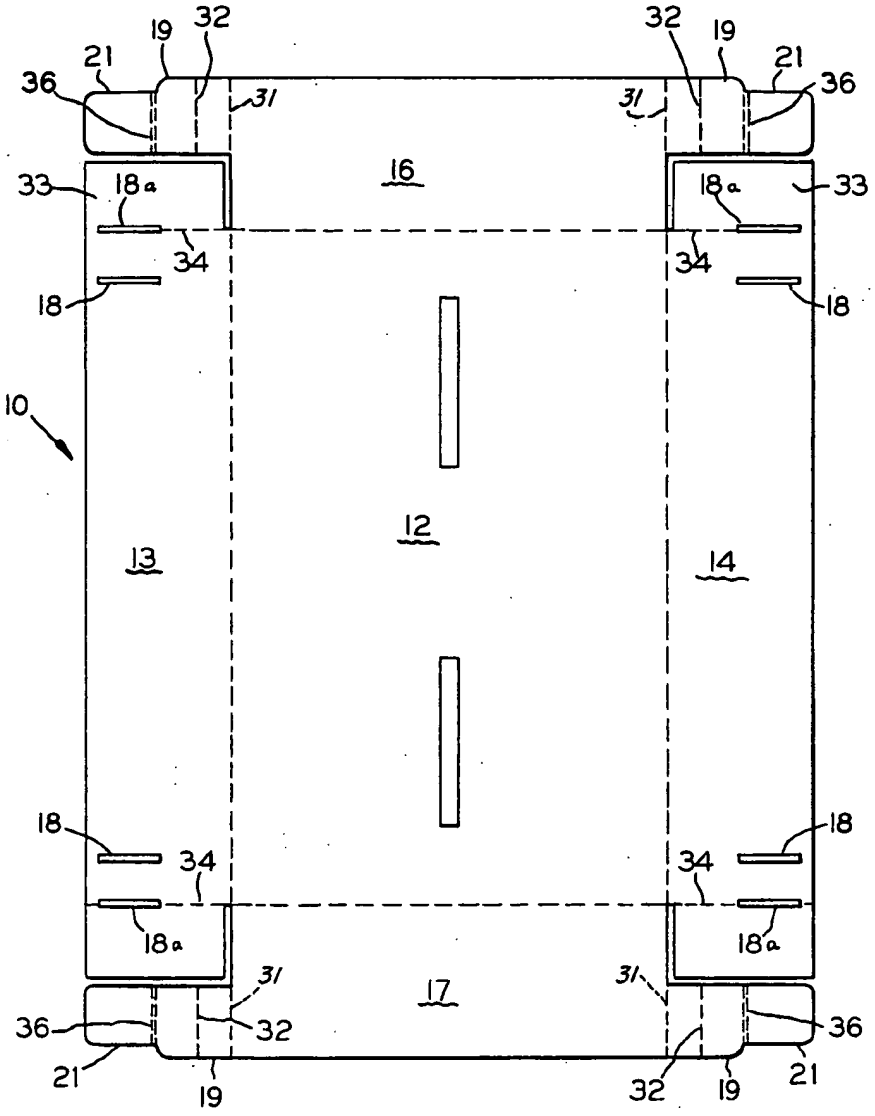

FIG - 1

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SELF-LOCKING TELESCOPING CONTAINER

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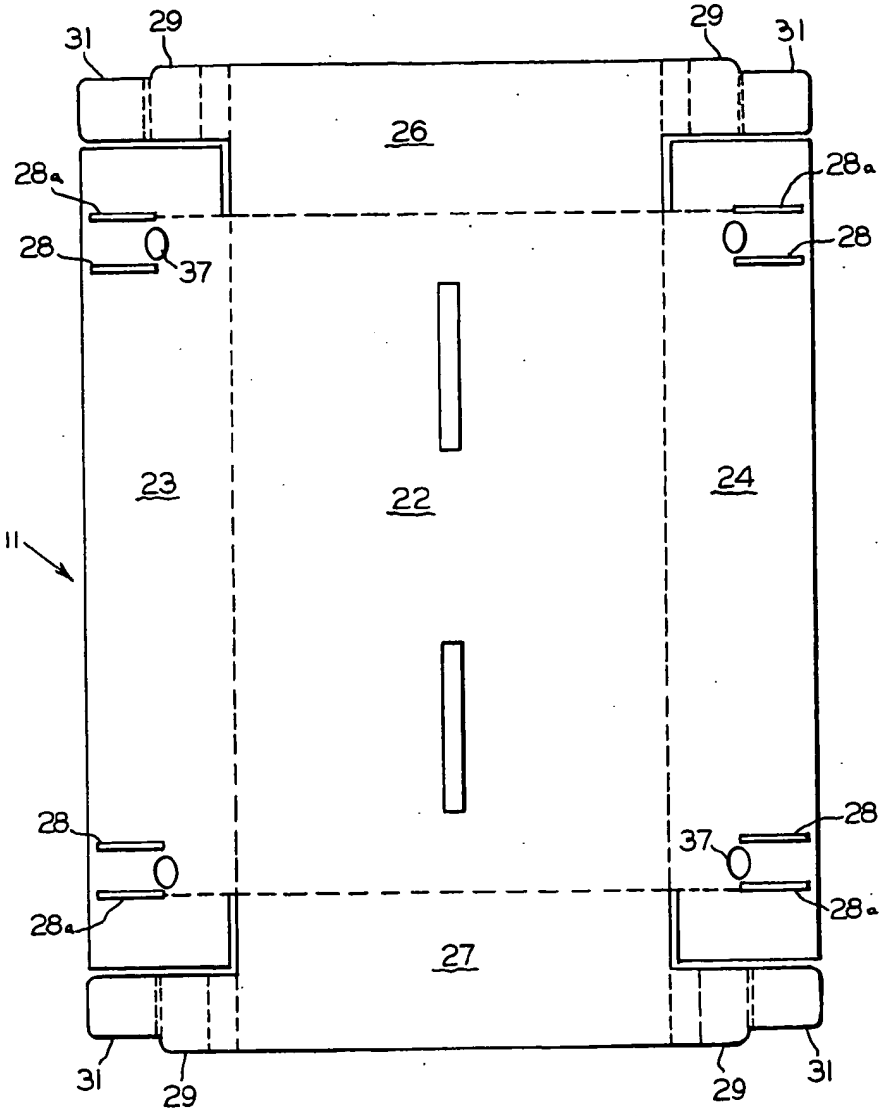

FIG-2

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SELF-LOCKING TELESCOPING CONTAINER

Filed May 8, 1961 5 Sheets-Sheet 3

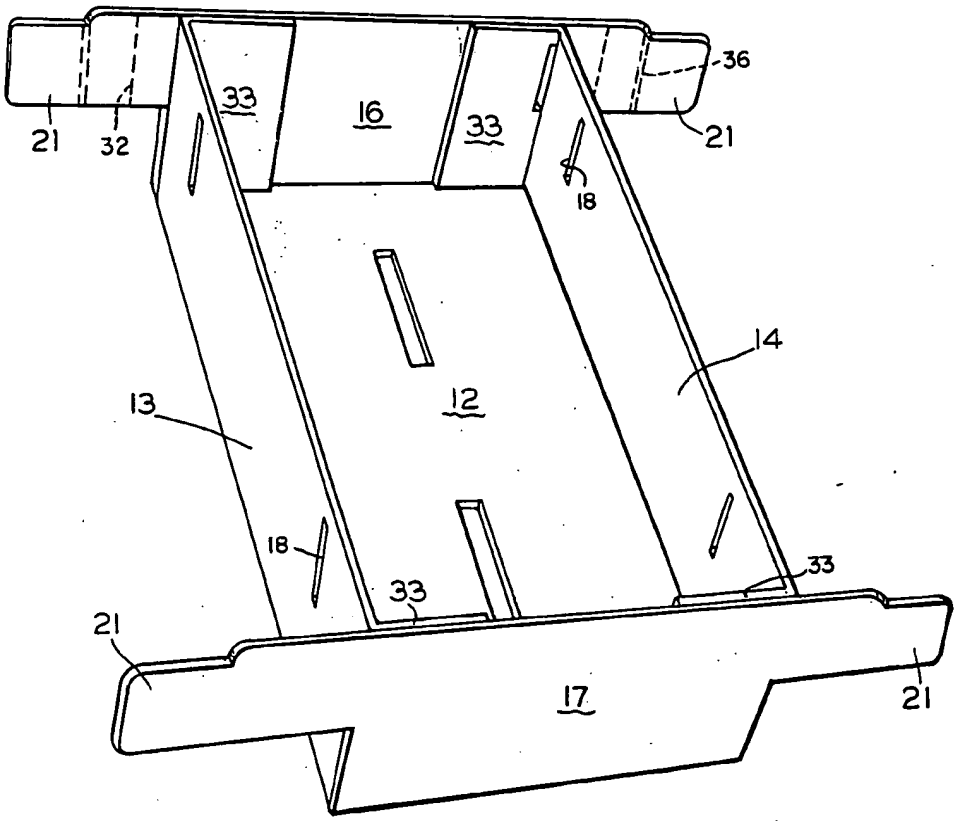

FIG - 3

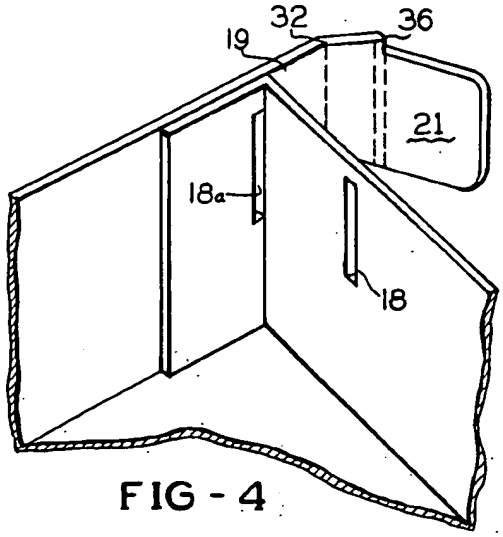

FIG - 4

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SELF-LOCKING TELESCOPING CONTAINER

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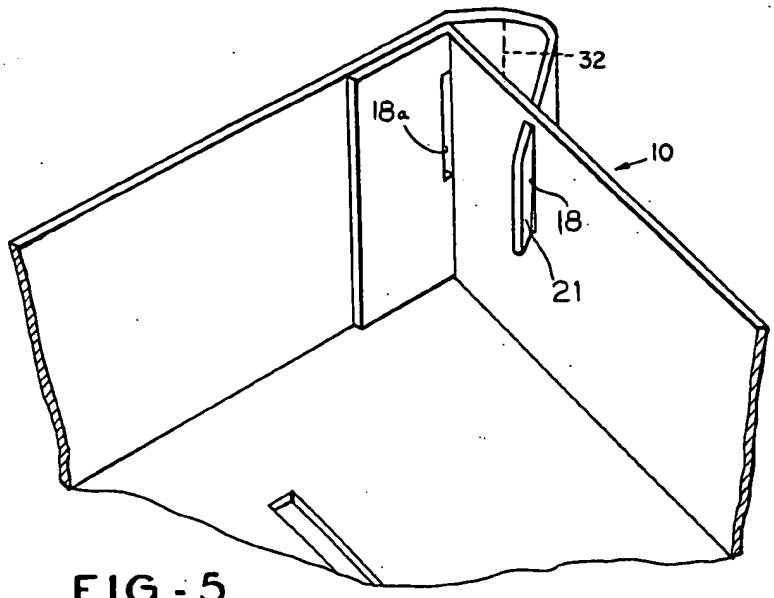

FIG - 5

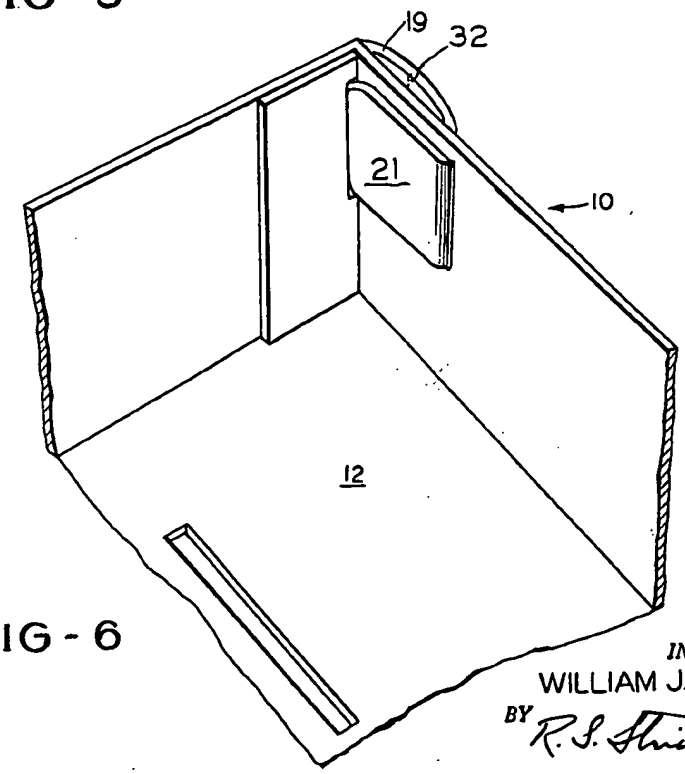

FIG - 6

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SELF-LOCKING TELESCOPING CONTAINER

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FIG - 7

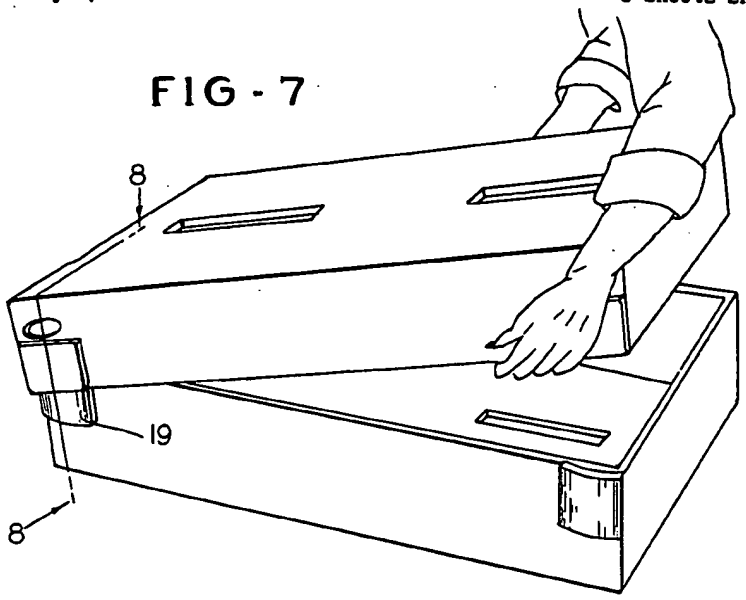


FIG - 8

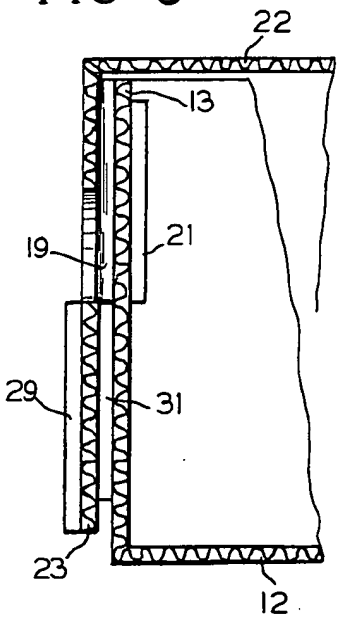
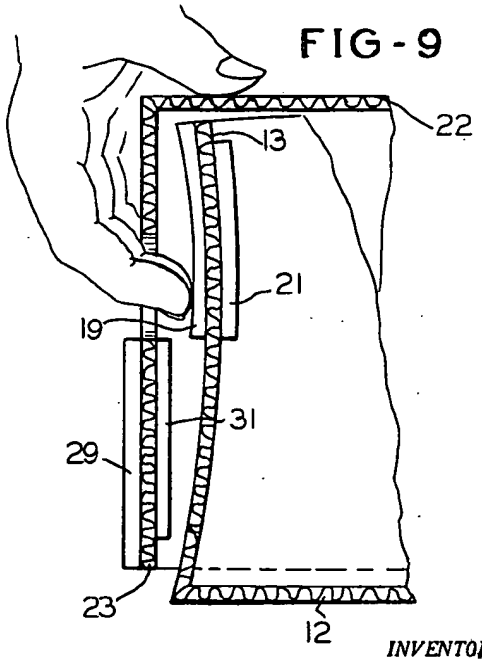


FIG - 9



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United States Patent Office 3,093,291 Patented June 11, 1963

3,093,291

SELF-LOCKING TELESCOPING CONTAINER

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Filed May 8, 1961, Ser. No. 108,424
1 Claim. (Cl. 229—35)

The present invention relates to a container device and, in particular, is directed to a container fabricated of paperboard comprising a body unit and a cover unit where the cover is operative to receive the body in telescoping fashion to form a fully closed container.

A particular feature of the present invention is the provision of a container of the general class described above fabricated from two individual blanks of paperboard material without the use of tape, staples, glue or other materials normally utilized to erect a carton and to retain it in an erected condition.

An additional feature of the invention is the provision of a container comprising a pair of telescoping units having means for functioning dually to (1) retain the carton in its erected condition and (2) retain the units locked together.

An additional feature of the invention is the provision of manually operable means effective to unlock one unit from the other whereby the body unit can be removed from its telescopic relationship relative to the cover unit.

A container embracing certain features of the present invention may comprise a cover structure having a top panel, depending sidewalls and end walls and a body portion having a bottom panel, upstanding sidewalls and end walls, said cover structure being operative to receive the body portion in telescopic fashion to close the container, the improvement comprising tabs formed on the end walls of the cover structure and body portion, respectively, operative to engage slots formed in the sidewalls to retain the end walls and the sidewalls connected togeher in a posiion generally normal to the plane of the top and bottom panels, respecively, said tabs being so disposed on the cover structure and the body portion that when the body portion is received within the cover structure in telescopic fashion, the cover tabs interfere with the body tabs to lock the body portion and cover structure together.

Other features and advantages of the present invention will become more apparent from an examination of the succeeding specification when read in conjunction with the appended drawings in which:

FIG. 1 shows a plan view of the blank utilized to form the body of the package;

FIG. 2 is a corresponding cover blank;

FIG. 3 through 6 are illustrative of the steps in erecting the blanks of FIGS. 1 and 2 to develop the body unit and the cover unit, respectively;

FIG. 7 shows the manner of disposing the cover unit and body unit in telescoping relationship, and;

FIG. 8 shows a portion of the telescoped units with the interfering tabs in interlocking relationship, and,

FIG. 9 shows the manner of manually unlocking the units to free the body from the cover.

Referring now to the drawings and, in particular, to FIGS. 1 and 2, there is shown body blank 10 and cover blank 11.

The body blank comprises a body panel 12 having hinged thereto a pair of opposed sidewalls 13 and 14 and opposed end panels 16 and 17. The sidewalls are slotted as at 18 and 18*a* to receive and lock corner tabs or flaps 19 and 21 formed on the end panels in a manner which will become more apparent hereinafter.

The cover blank 11 includes a cover panel 22 having a pair of opposed sidewalls 23 and 24 hinged thereto. End panels 26 and 27 are also hinged to the cover panel.

The side panels 23, 24 are formed with two pairs of slots 28—28 and 28*a*—28*a* while the end panels carry integrally connected tabs or flaps 29—29 and 31—31 in the same general arrangement as described with respect to the body blank.

The prime difference between the body blank 10 and the cover blank 11 is that the tabs 19 of the body blank are formed with scores indicated by the reference numeral 32 to effect a spring action as will be described in more detail hereinafter.

Referring now to FIGS. 3 through 6, the steps in erecting the container will be described noting that although the description will deal with the body blank, the cover is erected in the same fashion.

Sidewalls 13 and 14 are rotated about score lines (dotted lines) to an upright position generally normal to the plane of the body blank 12 with end flaps 33 turned inwardly as shown about score line 34. Next the end walls 16 and 17 are rotated to an upright position relative to the body blank 12 so that they too assume a position normal to the plane of the body panel.

Thereafter flaps 21 are rotated about score lines 36 first and tabs and flaps 19 and 21 are further rotated about lines 31 as shown in FIGS. 4 and 5 so that flap 21 is tucked into slot 18.

After the flap 21 is fully received within the slot 18, note that score line 32 is operative to give the flap 19 a generally bowed effect causing it to protrude outwardly as shown in FIG. 6.

Next the flap 21 is inserted in the slot 18*a* to complete the erection of the unit.

Note all corners are constructed in the fashion just described and no glue, staples, or other fastening means are needed between flaps 21 and the sidewalls 13 or 14, such means being optional.

As stated previously, the only difference between the cover and the body unit is that the body unit is provided with the additional score 32—32 in the flaps 19 to cause these flaps to protrude slightly or to bow outwardly as shown in FIG. 6.

With the cover and body unit so erected, the cover is dropped over the body unit so that the body is received telescopically within the cover.

With the units in this position, it is apparent from an examination of FIG. 8 that flaps 31 of the cover unit slide past flaps 19 of the body unit and assume an interlocking position.

To insure that the interlocking occurs as a result of interference between flaps 31 and 19, respectively, flap 19 is of sufficient extra length and scored on the inside as indicated by the dotted line referenced 32 causing this flap to bow outwardly as previously described.

Note that the sidewalls 23 and 24 of the cover are formed with apertures 37—37 through which one may insert a finger or other suitable instrument in registry with the scored tabs to push sidewalls 13 and 14 of the body unit inwardly relative to mating sidewalls 23 and 24 effective to clear the interference between tabs 19 and 31 so that the cover may be pulled free of the body.

The particular advantage of the present invention is that a carton structure has been devised which can be erected without the use of glue, brads, staples, or the like.

The structural features utilized to fasten the carton units together, namely, the flaps 19, 21, 29 and 31, are also utilized as a lock means for locking the units of the carton together.

It is anticipated that a variety of modifications and changes may be devised in the disclosed embodiment of the invention without departing from the spirit and scope of the invention.

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What is claimed is:

In a container of the type comprising a cover portion having a top panel with depending cover walls and a body portion having a bottom panel with upstanding body walls, said cover portion being operative to receive the body portion in telescopic fashion to close the container, the improvement comprising corner tabs formed on the mating walls of the telescoped body and the cover portions, respectively, operative to engage slots formed in contiguous walls of said body and cover portions respectively to retain the walls connected together in a position generally normal to the plane of the top panel in the cover portion and to the plane of the bottom panel in the body portion respectively, said tabs being so disposed spaced from said top and bottom panels on the cover walls and on the body walls respectively that when the body portion is received within the cover portion in telescopic fashion, the cover wall tabs interfere with the body wall tabs to lock the body and cover together, each of the tabs on the body walls being of sufficient length and being formed with a score line so as to cause said body wall tabs to break partially and bow outwardly opposite said score line in resilient fashion to insure tab interference and to strengthen the lock, and means on said cover walls in registry with the scored tabs for facilitating manual contact with said scored tabs whereby said scored tabs are bowed inwardly to unlock the body from the cover.

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